Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

DRAFT
Conditional Major / Synthetic Minor, Operating
Permit: F-06-068
TransMontaigne Product Services, Inc. - Owensboro Terminal
Owensboro, KY 42303
February 19, 2007
Ralph Gosney, Reviewer

SOURCE ID:	21-059-00127
SOURCE A.I. #:	969
ACTIVITY ID:	APE20040002

SOURCE DESCRIPTION:
TransMontaigne Product Services, Inc. operates a bulk gasoline terminal located in Owensboro, Kentucky, identified as the Owensboro Terminal. The terminal complex dispenses diesel fuel and conventional gasoline. Currently, the terminal is using five diesel fuel storage tanks (low VP petroleum product), two gasoline storage tanks, two additive storage tanks, and one petroleum contact tank at the terminal. The source has one (1) two-bay tank truck loading rack with seven (7) loading arms and associated pipeline equipment in operation. The truck loading rack is controlled by a 95% efficient John Zinc Vapor Combustion Unit (VCU). The terminal currently processes 380,000,000 gallons/year of conventional gasoline and 420,480,000 gallons/year of diesel (distillate) through the truck loading rack, and 441,504 gallons/year of diesel (distillate) at the barge loading.

The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of volatile organic compounds (VOC) is greater than one-hundred (100) tons per year. The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of total hazardous air pollutants (HAPs) is greater than twenty-five (25) tons per year. The permittee has requested a voluntary gasoline throughput limit in order to limit source wide emissions to 9 tons per year (tpy) for a single HAP, 22.5 tpy for combined HAPs and 90 tpy for VOC.

The source has been operating under State Origin Permit S-96-154 (Revision 2), issued on March 17, 1998. An application for permit renewal was received on March 24, 2000. This renewal permit is the initial Conditional Major operating permit issued pursuant to 401 KAR 52:030.

COMMENTS:
Since the issuance of permit S-96-154 (Revision 2), some equipment has been added to the facility. The following table provides a concise description of each emission unit at this source and changes, if any, to that equipment as requested by the permittee, and as included in this renewed permit.

Changes Made to the Facility Since Issuance of State Origin Permit

Permit Emission Point Description and Emission Point # Changes:

Emission Sources Listed Under Permit S-96-154 (Revision 2)		Emission Sources As They Exist Today		Explanation of Change
EP #	**Emission Point Description**	**EP #**	**Emission Point Description**	
01	One Internal Floating Roof Storage Tank (705,000 gallon capacity - gasoline)	01 (T-17-6)	Internal Floating Roof Gasoline or Lower Vapor Pressure Product Storage Tank Capacity: 705,180 gallons Installation Date: 1972	Description changed for clarity
02	Internal Floating Roof Storage Tank (2,520,000 gallon capacity - gasoline)	02 (T-60-5)	Internal Floating Roof Gasoline or Lower Vapor Pressure Product Storage Tank Capacity: 2,520,000 gallons Installation Date: 1996	Description changed for clarity
03	Four Fixed Roof Storage Tanks (1,058,000 gallon capacity - distillates)	03 (T-3-1, T-5-3, T-6-2, T-11-4)	Three Vertical Fixed Roof (VFR) and one Internal Fixed Roof (IFR) Lower Vapor Pressure (less than 1.5 psi) Product Storage Tank Product Stored: Diesel Capacity/Installation Date: T-3-1 - 132,972 gallons/1951, (IFR) T-5-3 - 191,352 gallons/1951, (VFR) T-6-2 - 259,434 gallons/1949, (VFR) T-11-4 - 474,852 gallons/1940, (VFR)	Description changed for clarity
04	Two-Bay Loading Rack (Fourteen Loading Arms)	04 (LR-1)	Two-Bay Loading Rack (Seven Loading Arms)	Modified in 1997 to reduce total loading arms from 14 to 7
05	Barge Loadout of Distillates	05 (BRG-1)	Barge Loadout of Distillates Installation Date: 1996	No change
06	Valves, Flanges, and Pumps	06 (FUG-1)	Fugitive Emissions	Description changed for clarity
		07 (T-50-7)	Vertical Fixed Roof Lower Vapor Pressure (less than 1.5 psi) Product Storage Tank Product Stored: Diesel Capacity: 2,100,000 gallons Installation Date: 1997	New Tank
		8 (T-A)	Horizontal Fixed Roof Additive Storage Tank Installation Date: 1996 Capacity: 21,000 gallons	New tank
Insignificant Activities				
		(--)	Surface painting of tanks	
		(T-B)	Horizontal Fixed Roof Additive Storage Tank, Installation Date: 1996 Capacity: 3,990 gallons	New tank
		(T-C)	Horizontal Fixed Roof Additive Storage Tank Installation Date: 2006 Capacity 11,676 gallons	New tank

Type of control and efficiency:

VOC and organic HAP emissions from the loading racks are controlled by a Vapor Combustion Unit (VCU) with 95% efficiency.

Emission factors and their source:

Tank emissions are calculated using US EPA TANKS V. 4.09. Gasoline loading rack emissions are based on initial compliance testing performed in 01/07/1997 which resulted in VOC emissions of 14.02 mg/L of gasoline. Diesel loading rack emission factors are based on AP-42, Section 5.2. Gasoline HAP emissions are based on speciation factors from API's *Hazardous Air Pollutant Emissions from Gasoline Loading*. NOx and CO emission rates for the VCU are based on a manufacturer's guarantee. Fugitive emissions are calculated based on API's *Fugitive Emissions from Equipment Leaks II: Calculation Procedures for Petroleum Industry Facilities*.

Applicable Regulations:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.* This rule applies to storage tanks T-60-5, T-50-7 and T-A since they each have a capacity greater than the rule applicability threshold of 75 m^3 (19,813 gallons) and they were constructed after July 23, 1984. The requirements of Subpart Kb, as well as 40 CFR 60, Subparts K and Ka, are not included in this permit for other storage tanks at this plant since such storage vessels either were constructed prior to the rule applicability date and have not been approved for modification or reconstruction; do not store a petroleum liquid as defined, or are less than the related storage capacity for rule applicability.

401 KAR 60:005, Section 3, incorporating by reference40 CFR 60.500 to 60.506 [Subpart XX], *Standards of Performance for Bulk Gasoline Terminals*, applies to the emission points 04 (LR-1) and 06 (FUG-1). Related emissions limits, monitoring, testing, record keeping and reporting requirements are included in the permit.

Non-Applicable Regulations:

401 KAR 50:012, *General Application.* This regulation requires that, in the absence of a standard specified in these administrative regulations, a major source apply control procedures that are reasonable, available, and practical. This rule does not apply to this source because it is not a major source of air contaminants and the requirements of 40 CFR 60, Subpart XX and Subpart Kb are applicable.

401 KAR 63:002. [40 CFR Part 63] *National Emission Standards for Hazardous air Pollutants*

- 40 CFR Part 63, Subpart R, *National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations).* At the PTE of this terminal, the MACT standard does not apply since hazardous air pollutant emission rates are below 10 tpy for any specific hazardous air pollutant and 25 tpy for combined HAPs, respectively. No sections of this federal regulation apply to the terminal.
- 40 CFR Part 63, Subpart Y, *National Emission Standards for Marine Vessel Loading and Unloading Operations*. This source is not a major HAP source and therefore does not meet the definitions of "source(s) with emissions less than 10 and 25 tons" or "source(s) with emissions greater than 10 and 25 tons", as per 40 CFR 63.561. Therefore, the requirements for the MACT standard (§63.560(a)) do not apply to barge loading operations at the terminal and are not included in this permit. Additionally, the source does not meet the definition of "source(s) with throughput less than 10 M barrels and 200 M barrels" since they do not conduct gasoline or crude barge loading. Therefore, the requirements for the RACT standard (40 CFR 63.560(b)) <u>are not applicable</u>.

401 KAR 59:050, *New Storage Vessels for Petroleum Liquids.* The following storage tanks commenced after the classification date of April 9, 1972:

02 (T-60-5)	(Product Stored: Gasoline; Capacity: 2,520,000 gallons; Installed 1996)
07 (T-50-7)	(Product Stored: Diesel; Capacity: 2,100,000 gallons; Installed 1997)
08 (T-A)	(Product Stored: Additive; Capacity: 21,000 gallons; Installed 1996)
08 (T-B)	(Product Stored: Additive; Capacity: 3,990 gallons; Installed 1996)
08 (T-C)	(Product Stored: Petroleum Contact Water; Capacity: 11,676 gallons; Installed 2006)

This rule does not apply to these tanks because EPs 07 and 08 (T-C) do not store petroleum liquids as defined; EP 02 commenced after July 24, 1984; and EP 08 (T-A) and 08(T-B) are not located in a nonattainment area for ozone and this is not a major source of VOC.

401 KAR 61:050, *Existing Storage Vessels for Petroleum Liquids.* This rule applies to each storage vessel for petroleum liquids with a storage capacity of greater than 2,195 liters (580 gallons) that commenced before the classification date of April 9, 1972, and which is located in a county or portion of a county designated ozone nonattainment under 401 KAR 51:101, except marginal nonattainment. This rule does not apply to this terminal since McCracken County is not an ozone nonattainment area.

401 KAR 61:055, *Existing Loading Facilities at Bulk Gasoline Terminals.* The affected facility (loading rack) at this bulk gasoline storage terminal did not commence before the classification date of June 29, 1979. Also, this source is not located in an ozone nonattainment area as defined in 401 KAR 51:010 and it is not a major source of VOC. Therefore, this rule does not apply to this facility.

40 CFR 64, *Compliance Assurance Monitoring (CAM),* does not apply to any emission unit because this source is being approved to operate under a Conditional Major permit and, pursuant to 40 CFR 64.2(a), the requirements of this rule are applicable only to a source required to obtain a Title V (Part 70 or 71) permit.

EMISSION AND OPERATING CAPS DESCRIPTION:

The permittee has requested voluntary permit emission limits of 9 tons per year (tpy) or less of a single hazardous air pollutant (HAP), 22.5 tpy of less of combined HAPs, and 90 tpy or less of volatile organic compounds (VOC). VOC and organic HAP emissions from the Owensboro loading rack are controlled by a John Zink Vapor Combustion Unit. VOC Emissions are below the NSPS limit of 35 grams/liter of gasoline transferred. All gasoline storage tanks have floating roofs. Through recordkeeping and reporting, the terminal will maintain parameters which will ensure operation below any emission limits or standards. Enforceable source wide emission limitations have been incorporated into Section D of the permit.

PERIODIC MONITORING:

Monitoring for the loading rack at the Owensboro Terminal is performed in accordance with 40 CFR 60 Subpart XX, which includes tank truck tightness checks. Monthly VOC leak checks are required for the following: the vapor collection system, the vapor processing system and loading rack during the process of loading gasoline.

For the Vapor Combustion Unit a log of gallons of petroleum products loaded or processed is maintained and a daily log of combustion chamber temperature and maximum vacuum pressure produced during the gasoline loading operations is maintained.

The permittee shall monitor the average monthly temperature, the type of liquid, and the Reid vapor pressure of the stored liquid, and duration time of liquid stored.

When barges are being loaded, the source must maintain a log of date loaded, material, and vapor pressure.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.